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Docket No. 3673-0163P

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AMENDED SET OF CLAIMS

1. (Currently Amended) A ball trajectory measuring apparatus comprising:
 - a first camera having an angle of view for photographing a flying ball from a back of the flying ball;
 - a second camera having an angle of view overlapping with the angle of view ~~related to that~~ of the first camera and serving to photograph the back of the flying ball later than the first camera;
 - a third camera for photographing a front of the flying ball;
 - a control portion for controlling photographing timings of the first, second and third cameras for obtaining a plurality of synchronized images by the first, second and third cameras; and
 - a calculating portion for calculating position coordinates of the ball based on image data obtained by the first, second and third cameras as time series data with the flight of the golf ball, by triangulation, and based on the calculated position coordinates, the ball trajectory ~~directions of optical axes and angles of view of the respective cameras~~,
 - ~~wherein the angle of view of the first camera partially overlaps with that of the second camera, the angle of view of the second camera is related to that of the first camera based on ball images which are simultaneously photographed by the first camera and the second camera, and a correspondence of the coordinates in the angle of view of the first camera to those in the angle of view of the second camera is grasped by the calculating portion.~~

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2. (Previously Presented) The ball trajectory measuring apparatus according to claim 1, wherein the first camera is positioned behind a ball launch point, the second camera is positioned between the launch point and a drop point, and the third camera is positioned after the drop point.

3. (Canceled)

4. (Currently Amended) A ball trajectory measuring apparatus comprising:
a first camera having an angle of view for photographing a front of a flying ball;
a second camera having an angle of view overlapping with the angle of view ~~related to that~~ of the first camera and serving to photograph the front of the flying ball earlier than the first camera;

a third camera for photographing a back of the flying ball;

a control portion for controlling photographing timings of the first, second and third cameras for obtaining a plurality of synchronized images by the first, second and third cameras; and

a calculating portion for calculating position coordinates of the ball based on image data obtained by the first, second and third cameras as time series data with the flight of the golf ball, by triangulation, and based on the calculated position coordinates, the ball trajectory, ~~and based on position coordinates, directions of optical axes and angles of view of the respective cameras,~~

~~wherein the angle of view of the first camera partially overlaps with that of the second camera, the angle of view of the second camera is related to that of the first camera~~

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~~based on ball images which are simultaneously photographed by the first camera and the second camera, and a correspondence of the coordinates in the angle of view of the first camera to those in the angle of view of the second camera is grasped by the calculating portion.~~

5. (Previously Presented) The ball trajectory measuring apparatus according to claim 4, wherein the first camera is positioned after a ball drop point, the second camera is positioned between a launch point and the drop point, and the third camera is positioned behind the launch point.

6. (Canceled)

7. (Currently Amended) A ball trajectory measuring apparatus comprising:
a first camera for photographing a flying ball from a back of the flying ball;
a second camera having an angle of view related to that of the first camera and serving to photograph the back of the flying ball later than the first camera;
a third camera for photographing a front of the flying ball;
a control portion for controlling photographing timings of the first, second and third cameras for obtaining a plurality of synchronized images by the first, second and third cameras; and
a calculating portion for calculating position coordinates of the ball based on image data obtained by the first, second and third cameras as time series data with the flight of

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the golf ball, by triangulation,, and based on the calculated position coordinates, the ball trajectory ~~directions of optical axes and angles of view of the respective cameras,~~

~~wherein the angle of view of the first camera partially overlaps with that of the second camera, the angle of view of the second camera is related to that of the first camera based on ball images which are simultaneously photographed by the first camera and the second camera, and~~

wherein the first camera and the second camera are located at substantially the same distance, at the same elevation and directly behind the launch point, said first and second cameras are inclined upward from a horizontal direction, and an angle of inclination of said first camera is greater than an angle of inclination of said second camera.

8. (Previously Presented) The ball trajectory measuring apparatus according to claim 5, wherein said first and second cameras are inclined upward from a horizontal direction, and an angle of inclination of said first camera is less than an angle of inclination of said second camera.

9. (Previously Presented) The ball trajectory measuring apparatus according to claim 1, wherein the flying ball is photographed by only said first and said third camera during a first portion of the flight of the flying ball, said first, second and third cameras during a second portion of the flight of the flying ball, and only said second and third cameras during a third portion of the flight of the flying ball.

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10. (Previously Presented) The ball trajectory measuring apparatus according to claim 4, wherein the flying ball is photographed by only said third and said second camera during a first portion of the flight of the flying ball, said first, second and third cameras during a second portion of the flight of the flying ball, and only said first and third cameras during a third portion of the flight of the flying ball.

11. (Previously Presented) The ball trajectory measuring apparatus according to claim 7, wherein a correspondence of the coordinates in the angle of view of the first camera to those in the angle of view of the second camera is grasped by the calculating portion.

12. (Previously Presented) The ball trajectory measuring apparatus according to claim 7, wherein the flying ball is photographed by only said first and said third camera during a first portion of the flight of the flying ball, said first, second and third cameras during a second portion of the flight of the flying ball, and only said second and third cameras during a third portion of the flight of the flying ball.

13. (New) The ball trajectory measuring apparatus of claim 8, wherein the angle of inclination of the second camera is between 7 and 40 degrees.